

Who Says What about Whom:
Cue-taking Dynamics in the Impression Formation Processes on Facebook

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Abstract

Social information processing (SIP) theory claims that computer-mediated communication (CMC) users form impressions of others by taking heuristic cues available in the web environment. As social media offer more various cues, however, the environment has become more complex. This study explores which cues primarily or secondarily influence CMC users in their impression formation of a political candidate in a cue-rich environment. More specifically, based on the SIP theory and the social identification model of deindividuation (SIDE), we examined how age-group identification influenced impression-formation dynamics. Participants (N=520) were placed randomly into a 2(positive/negative comments) X 2(younger/older commenters) X 2(younger/older candidate) design. All participants were exposed to a fictitious candidate's Facebook profile with unknown others' comments on the candidate before reporting the perceived trustworthiness of the candidate. The results showed that the comments' valence was the most influential cue, and that the age of the commenters and the candidate also influenced impression formation. It was the older age group, not those the same age as participants, who increased the effect of the comments' valence on the young voters, and the interaction was significant only when the candidate was young. This three-way interaction suggests that there might be a hierarchy among heuristic cues.

Introduction

New technologies come with new possibilities. Online social networking technologies have enabled the new media environment to provide users with a broader and more diverse set of cues for impression formation than in the text-dominated Web environment of only a decade ago. Although people have long utilized heuristics either consciously or non-consciously as the basis of personal judgments (Sundar, 2011), the cues people rely on in digital media environments have evolved and expanded as new communication technologies advance.

One of the main developments in computer-mediated communication (CMC) is the increased role of unknown others' reactions to a target serving as a cue for target impression formation. In face-to-face communication, the role of third parties is not as pervasive as in CMC because their reactions are usually less accessible and heard much later than those of "known others" such as family and coworkers. As interactive technologies advanced, however, CMC users became able to simultaneously take cues from "unknown others" who they did not necessarily have an acquaintance with offline (Nishimura, 2010). It became common for Internet users to read unknown others' positive or negative comments on a target via online bulletin boards or comments sections (Lee, Lancerdorfer, & Lee, 2005). Those third parties' comments emerged as an influential other-generated cue about the target although in most of the cases they had no idea who the commenters were.

Newly adopted interactive features of social networking sites (SNSs) have added more cues to the online impression formation dynamics. Unlike other dyadic CMC settings such as email and instant messaging where the sender unilaterally delivers self-created information to the receivers, SNSs provide additional repositories of impression-enabling cues (Walther, Van Der Heide, Kim, Westerman, & Tong, 2008; Walther, Van Der Heide, Hamel, & Shulman, 2009). For instance, Facebook not only provides self-generated (e.g.,

self-presentation on one's own profile) and other-generated cues (others' comments) about a profile owner (target), but also offers cues about the cues such as the commenters' profile photos and links to their profiles. On an average day, 15% of Facebook users update their own status and 22% comment on another person's post or status (Pew Internet & American Life Project, 2011). These features enable observers to mix and match various information from multiple sources to maximize positive impression formation.

The role of others-generated information on the observers' perceptions of a target person or object has increasingly gained CMC scholars' attention (e.g., Walther et al. 2008; Walther et al. 2009). Several studies have compared which cues have a larger influence on impressions (e.g., content from source or others). However, many questions remain unanswered concerning exactly when various cue types exert relative influence and how they interact with one another. Among the diverse message and source cues available on SNSs, for instance, what elements will function as primary cues in forming impressions and what components will be secondary or tertiary? Can secondary cues increase or decrease the effect of the primary cues? Will observers put different weight on the primary cues based on the secondary cues attached to them? These are empirical questions which need to be addressed in a variety of contexts, and one of those contexts is political communication.

As two thirds (66%) of American adult Internet users use SNS (Pew Internet & American Life Project, 2012), SNSs have become a useful means for political actors to strategically present themselves to voters without having to go through a journalists' lens of interpretation (Banwart, 2000; Tedesco, Miller, & Spiker, 1999). The 2008 U.S. presidential election was even called the "Facebook election" (Johnson & Perlmutter, 2010) because of the wide use of social media such as Facebook, MySpace, and YouTube during the campaign (Hanson, Haridakis, Cunningham, Sharma, & Ponder, 2010). As there has been speculation that social media played a significant role in the election in affecting young voters' perception

and behaviors (e.g., Hesseldahl, MacMillan, & Kharif, 2008; Marchese, 2008; Owen, 2008), it is worth investigating how individuals actually utilize available information on a political candidate's SNS profile to make sense of the candidate.

By applying existing CMC and social psychology theories to the context of political communication, this study examines how other-generated cues on a political candidate's Facebook profile influence individuals' perception of the candidate. Particularly, based on the social information processing theory of CMC (SIP theory; Walther, 1992) and social identification/deindividuation (SIDE) approach (Lea & Spears, 1991; Spears & Lea, 1994; Reicher, Spears, & Postmes, 1995), this study tested if the impact of the other-generated cues varied by the group identification of the commenters or of the candidate in terms of age. In other words, this research investigated if and how multiple message and source cues interacted in predicting the perceived trustworthiness of the candidate.

Literature Review

Impression Formation on SNSs and Other-generated Cues

Young American adults are in general known as being indifferent to and ignorant of politics, and political sectors have been concerned about how to inform and engage the young voters (Austin, Van de Vord, Pinkleton, & Epstein, 2011; Delli Carpini, 2000). One way to stimulate the hard-to-reach people is to understand their perspectives within the venues they consider their own and feel comfortable (McDevitt & Chaffee, 1998). As 86% of American Internet users between 18 and 29 years of age use SNSs (The Pew Internet & American Life Project, 2012), SNSs have emerged as an important means to approach young voters. Because Facebook dominates the 92% of the SNS users (Pew Internet & American Life Project, 2011), political entities are particularly interested in reaching out and giving good impressions to the young voters via Facebook.

Studies have demonstrated that CMC users manage to form impressions of distant

others over time without exchanging nonverbal, social context cues that are available in most face-to-face settings (e.g., gestures and facial expressions) (Walther, 1992). Social information processing theory (SIP theory) posits that, although it may require more time, CMC users can perceive and evaluate their communication partners with a similar level of accuracy to that of face-to-face communicators by utilizing whatever information available within the environment (Walther, 1992). The available information can include incidental information that the partners do not intend to present such as others' comments on a Facebook profile owner and those commenters' profile photos (Walther et al., 2008, Walther et al., 2009). Particularly, studies have found that other's opinion significantly affects individuals' perceptions of social reality (Lee & Jang, 2010; Sundar & Nass, 2001). This finding may belong to what Mutz (1998) called "impersonal influence." In her book "Impersonal influence," Mutz articulated how individuals' perceptions of anonymous others' opinions and experiences affected their own opinions and behaviors through the mediated channels such as TV. Her focus at that time was on the capacity for presentations of "collective" opinion or experience reflected in the opinion polls or media coverage (p. 4). However, fragmentary presentations of others' opinions seem to be taken as the cue for general opinion climate and exert similar influence on individuals as well. That is, individuals are affected by visible opinions of others available at the moment regardless of their representativeness (e.g., Lee & Jang, 2010). It seems that individuals tend to regard others' reactions as a snapshot of the typical or predominant opinion, and infer what the appropriate response for them might be (Fein et al., 2007). This effect speaks to informative influence of others' opinions. In other words, people take the other-generated cue with a desire to be right (i.e., informative influence), rather than to be liked (i.e., normative influence) (Deutsch & Gerald, 1955).

In impression formations, other-generated cues are utilized to attribute certain

characteristics to a target. Individuals take others' descriptions or evaluations of a person as a context when perceiving the person (Brunswik, 1956; Melamed & Moss, 1975). Regardless of their actual reliability, people seem to regard others' comments as a valid heuristic cue because of their vividness and accessibility (Lee & Jang, 2011). As SIP theory suggests, information that has certain impression-bearing value is likely to be utilized by CMC users to achieve the same levels of impressions as those of face-to-face communication. Other-generated cues exert a significant influence over observers' inferences about the target even when others' comments do not match the target's self-disclosed information (Walther et al., 2008; Walther et al., 2009; Walther & Parks, 2002).

Based on extant CMC literature, it is likely that others' online comments about or directed toward a political candidate will influence individuals' perception of the candidate. As the core dimension of credibility and overall impression (Hovland, Janis, & Kelley, 1953; Duarte, Siegel, & Young, 2012), perceived trustworthiness is likely to be influenced. Trustworthiness refers to the perceived honesty, character, and safety of the communicator (Perloff, 2003), and it tends to determine whether to approach or avoid a person as well as whether to accept a message from the person or not (Slepian, Young, Rule, Weisbuch, & Ambady, 2012). Trustworthiness is an especially important virtue for politicians, since politicians are "professional" and "perpetual persuaders" (Combs & Keller, 2010, p. 328). To persuade the voters to win elections, political candidates expend vast effort to look trustworthy. When there is not only self-generated information but also public-generated information in the environment, however, their perceived trustworthiness is likely to be affected more by other-generated information than by self (target)-generated information. Thus, the following hypothesis is raised.

H1: Individuals are more likely to perceive a political candidate as more trustworthy when they are exposed to others' positive (vs. negative) SNS

comments about the candidate.

SIDE Model, Conformity and Stereotypes

The social identification/deindividuation effect (SIDE) model claims that visual anonymity and physical isolation in CMC enhance the salience of group identities and strengthen the impact of a variety of social boundaries such as the influence of norms and stereotypes (Spears & Lea, 1998). As text-based environments (e.g., email, instant messaging) allow only limited individuating cues, communicators tend to perceive themselves and others as representatives of social groups rather than idiosyncratic individuals. Subsequently, this phenomenon leads individuals to be more susceptible to group influence (Lea & Spears, 1991; Spears & Lea, 1994; Reicher et al., 1995; Postmes et al., 1998; Lee 2004). For instance, an individual is more likely to act as “a woman (or a man)”, “a young man (or a senior),” or “a white (or a non-white)” than as a unique individual with characters, and would treat other CMC users based on the same kind of group categorization. Although the SIDE model was developed based on the group identification of CMC partners rather than third parties, it is plausible that third parties are subject to the SIDE effect because the boundary conditions (i.e., lack of visual cues and awareness of others’ presence but constrained interaction with them) are met.

In terms of visual anonymity, SNSs provide a tricky context because of profile photos. Based on SIP theory, SNS users are expected to use not only others’ comments (i.e., primary cues) but also the commenters’ profile photos as available cues (i.e., cues about primary cues). Although commenters’ photos are the main source of group identification on SNSs that may promote SIDE, the existence of photos itself runs against the visual anonymity condition of SIDE. It is possible that the photos allow observers to identify commenters as idiosyncratic individuals not just as members of abstract social groups. Some studies found no evidence of group norm influence when CMC partners were visually

identifiable by portrait pictures (e.g., Spears, Lea, & Lee, 1990).

However, more recent studies demonstrated that, when basic demographics reflected in the small profile photos of others were their only detectable group identities, the presence of photos could even make the commenters' demographic identities more salient to observers (e.g., Spears, Lea, Postmes, & Wolbert, 2011). Age is one of the key demographic identities for facilitating self-categorization in online communications (e.g., Knobloch-Westerwick & Hastall, 2010; Lee, 2007). Particularly, age is reliably associated with diagnostic visual cues whereas many other social group categories such as nationality and profession are not easily distinguished from a single profile photo. Thus, it is likely that an Internet user categorizes unknown commenters based on their presumed age group identities and that the salience of group identities enhances the group influence (e.g., peer pressure). More specifically, individuals' heightened recognition of Facebook commenters as their same- or different-age group members is likely to influence the extent to which they will be influenced by the comments (Walther, 1992; Walther et al., 2010). Thus, the following hypothesis is posited.

H2: Commenters' age is a moderator of comments' valence on a candidate's perceived trustworthiness.

When other commenters are identified in terms of their social group identities, one of two mechanisms is likely to be at work. The first one is in-group/out-group dynamics based on shared identities. If the commenters are recognized as in-group members to an observer, based on the assumed similarity between the observer and the group members as a whole, the observer may have a more favorable attitude towards the commenters and feel more conformity pressure. Lack of individuating information also can lead to a distorted perception of greater consensus in a group (Walther et al., 2010). Thus, the observer is likely to be influenced more by (i.e., agree more with) in-group members' opinions rather than by

out-group members' opinions. The in-group favoritism and group norm influence are what scholars commonly infer from SIDE model. Those outcomes are also consistent with the social cognitive perspective which posits that social learning and vicarious influence are enhanced by a similarity between the model and the self (Bandura, 2001). Therefore, whether the commenters are young (i.e., in-group members) or not young (i.e., out-group members) may influence if or how much young individuals will be affected by their comments with the in-group members being more influential (Walther et al., 2010).

On the other hand, a totally different scenario is possible. When an observer recognizes commenters as members of certain social group, but not particularly as in-group/out-group members, the observer is likely to perceive or evaluate them based on stereotypes attached to the group. Although stereotyping is one of the potential effects SIDE model predicts as a result of enhanced salience of group categorization, SIDE studies commonly examined stereotyping in the context where the stereotyping worked to observers' advantage, which is merely another form of in-group favoritism (e.g., Postmes, 1997). However, there can be situations where observers recognize commenters as stereotypical social group members but not in a way biased towards their in-group members. One common stereotype attached to age groups relative to politics is that older people are in general more interested in and knowledgeable about politics. If a young voter recognizes an unknown commenter as a member of the older generation and also assumes that the older generation tends to have more informed views than the younger generation, that unknown commenters' comments may be more trusted and exert more influence on the voter than if the commenter would have been a member of the younger generation. In that case, the influence is not conformity effect, but it is still based on social group categorization. Based on whether the social group salience leads to conformity effect or mere stereotypical perception, one of the following competing hypotheses is likely to be supported.

H2a: The effect of comments' valence will increase when the commenters are young such that young participants will perceive the candidate even more (or less) trustworthy when young (vs. older) commenters positively (or negatively) comment.

H2b: The effect of comments' valence is likely to increase when the commenters are older such that young participants will perceive the candidate even more (or less) trustworthy when older (vs. young) commenters positively (or negatively) comment.

The presence of multiple cues from multiple sources (both sender and receiver) on SNS makes it hard to predict if and how all those cues will be used in impression formation processes. When an observer is influenced by others' comments as a function of commenters' age, will there be a boundary condition? For instance, will the interaction effect between comments and commenters' age differ by the candidate's age? In the case that a young voter is more influenced by older people's opinions than other young people's opinions in evaluating a political candidate based on certain age stereotypes, will the influence be larger when the candidate is young, or when the candidate is older? Will young individuals evaluate an in-group member (i.e., younger candidate) more highly when the person is complimented by their peers (young commenters) or by out-group members (older commenters)? Will the effect size or direction of interaction differ when the candidate is older? These are empirical questions to be addressed. To tap into the complex cue-taking dynamics which can influence the impression formation, the following research question was raised.

RQ: Will the interaction effect between comments' valence and commenters' age differ by a candidate's age?

Method

Participants

Participants were 520 college students from 18 to 29 years old ($M=20.77$, $SD=1.81$; 52.9% female). They were recruited from a large Midwestern university and received extra course credit in exchange for their voluntary participation. The ethnic composition of the sample was 74.4% Caucasian, 8.7% African American, 2.5% Hispanic, 10.4% Asian or Asian American, and 4.0% Other. The ideology of the participants was measured using an index of three items (ideology in terms of social, economic, and security issues) on an 11-point scale from very conservative to very liberal. When recalculated to the 0 to 1 range, the mean value was .52 and the standard deviation was .28.

Procedure

Participants accessed the experiment Web site using Qualtrics software. After reading a brief description of the study and signing the informed consent form by clicking “Agree to participate,” male and female participants were randomly assigned into one of the 8 conditions. Each participant was exposed to a mock Facebook profile, and answered a series of questions to measure their impressions of the candidate’s trustworthiness in the profile.

Experimental Manipulations. The study used a 2 (valence: positive vs. negative) \times 2 (commenters’ age: young vs. older) \times 2 (candidate’s age: young vs. older) between-subject factorial design. Valence of the comments, the commenters’ age, and the candidate’s age were operationalized through a mock Facebook profile of a fictitious political candidate in the local election. To achieve experimental control, a screenshot of the top part of the profile was presented as a stimulus. While the layouts and the design elements in the profile were kept the same across conditions, the candidate’s profile photo was manipulated by retouching the same photos into younger and older versions. To diminish confounding effects, multiple stimuli were used for the each candidate’s age and commenters’ age condition. That is, two males’ and two females’ photos were randomly used for the younger candidate condition

while two males' and two females' photos were randomly used for the older candidate condition, creating all eight candidate stimuli.

Valence of the comments and commenters' age were operationalized by placing two comments on the candidates' Facebook profile page, varying the tone of the comments and the pictures associated with the comments. For instance, "your speech did inspire me" "you seem like a genuine person" "you have earned my vote!" were the sentences included in positive comments. Negative comments included such sentences as "your speech was not inspiring at all" "you don't seem like a genuine person" and "you didn't earn my vote!" Each Facebook profile presented two comments (either both positive or both negative) from either two younger commenters (one male and one female who seem to be about 20 years old) or two older commenters (one male and one female who seem to be about 60 years old, see Figure 1 and 2 for an example of the mock profiles). Both male and female commenters' photos were used in both young and old commenters' conditions to eliminate the potential effect of the commenters' sex.

<Figure 1 and 2 about here>

Measurement. Perceived trustworthiness of the political candidate was measured using a semantic differential scale (Ohanian, 1990) that is composed 5 pairs of adjectives (i.e., dependable-undependable, honest-dishonest, reliable-unreliable, sincere-insincere, and trustworthy-untrustworthy) on an 11-point scale (Cronbach $\alpha = .97$). Observers' sex, race, and ideology were measured and included as covariates. Candidate's sex manipulation was also included as a covariate as both male and female images were used.

Results

A 2 (valence of others' comments) x 2 (commenters' age) x 2 (candidate's age)

analysis of covariance (ANCOVA) was conducted to examine perceived trustworthiness of the candidate. Manipulation check results showed that older-version candidates were perceived as significantly older than young-version candidates, $t(518) = 15.79, p < .001$.

The univariate analysis revealed a significant main effect for comments' valence, $F(1, 509) = 324.49, p < .001, \eta^2 = .38$, with participants' ideology, sex, and the candidate's sex controlled. Participants exposed to a fictitious political candidate's Facebook profile with positively-valenced comments regarded the candidate more trustworthy than those who were exposed to negatively-valenced comments ($M_{positive\ comments} = 6.67, SD = 1.64, M_{negative\ comments} = 3.69, SD = 2.11$). Thus, H1 was supported.

H2 predicting the two-way interaction between comments' valence and commenters' age was also supported. The effect of comments' valence on the candidate's perceived trustworthiness differed by commenters' age, $F(1, 509) = 4.88, p < .05, \eta^2 = .01$. Between the peer pressure (H2a) and the age stereotype hypotheses (H2b), it was the latter that was supported. The visual representation of the interaction between the comments' valence and the commenters' age (see Figure 3) revealed that participants (mean age = 20.77) were influenced more by older generation's views on the candidate (i.e., subject to the greater effect of message valence), $F_{valence}(1, 247) = 205.72, p < .001, \eta^2 = .45, M_{positive\ comments} = 6.82, SD = 1.63, M_{negative\ comments} = 3.48, SD = 2.08$, than by their own generation's, $F_{valence}(1, 259) = 122.42, p < .001, \eta^2 = .32, M_{positive\ comments} = 6.52, SD = 1.64, M_{negative\ comments} = 3.90, SD = 2.13$, with participants' ideology, sex, and the candidate's sex controlled. Participants perceived the candidate more positively when older (vs. young) people evaluated the candidate positively and more negatively when older (vs. young) people evaluated the candidate negatively.

<Figure 3 about here>

Relative to the RQ, an interesting and significant three-way interaction among comment valence, commenters' age, and candidate's age was found, $F(1, 509) = 4.42, p < .05, \eta^2 = .01$, controlling for participants' ideology, sex, and the candidate's sex. Commenter's age turned out to exert a significant moderating effect on the effect of comments' valence on perceived trustworthiness of a candidate only when the candidate was young, $F_{valence \times commenters' age}(1, 250) = 8.36, p < .05, \eta^2 = .02$. That is, the above-mentioned two-way interaction between comments' valence and commenters' age (H2) was qualified by this three-way interaction. When a young candidate was praised or criticized by older (vs. younger) people, young participants perceived the candidate even more positive or negative, respectively. However, when the candidate was older, the commenters' age did not make much difference in the effect of the comment's valence, $F_{valence \times commenters' age}(1, 256) = 0.01, p = .932, \eta^2 = .00$ (see Figure 4). It seemed that young participants took the commenters' age seriously only when the candidate of evaluation was young.

<Figure 4 about here>

Discussion

Based on the SIP theory, this study addresses the question of whether people considered not only a primary heuristic cue (e.g., others' comments) about a target person but also secondary cues (e.g., commenters' age) about the primary cues in forming a general impression of the target person in computer-mediated political communication. This study also tested whether the impression-bearing value of heuristic cues was affected by shared group identities (i.e., age similarity) or by the stereotypes attached to social groups (i.e., political knowledge).

Overall, the results were consistent with the SIP and SIDE framework. Although other commenters' reactions to the target induced the most significant influence as the primary cue on how the observers made sense of the target, participants did take secondary cues (i.e., commenter's age) provided in the environment. The study demonstrated that CMC users try to form an accurate impression of the target using available heuristic cues as SIP theory suggests. In some situations, however, they took only primary cues while in some other situations they took both primary and secondary cues, which is the phenomenon that SIP theory cannot explain.

As suggested by the SIDE perspective, participants tended to perceive other Facebook commenters as typical members of their social groups. The findings of this study further indicated how the salience of social group categorization influenced the impression-formation mechanism. It is often assumed that college-age people support a candidate whom other young (vs. old) people support. However, the current study results provided little evidence consistent with the assumed peer-conformity effect. Instead, stereotypical perception of age groups played a significant moderating role. It was the candidate older people spoke highly of who young participants evaluated more highly. This older commenters' effect was found even with participants' ideology and sex, and the candidate's sex controlled. The finding reflects the young participants' own ignorance of politics. If the participants think their peers and themselves are not very informed of or knowledgeable about politics, they will not trust the political opinions of those commenters who look as young as they are.

The reason why participants did not feel strong in-group favoritism or conformity pressure might be related to the nature of the social groups. Whereas anonymity produced a reliable effect of attraction and in-group bias in local or experimentally-conditioned groups in studies, the effect was not straightforward when wider social categories such as gender or nationality were concerned (Spears & Lea, 1998). As age is one of the wider social categories,

it is possible that age cue managed to induce group-based perception but was not strong enough to activate group-based attitudes, especially because it was not the only available cue. In other words, participants might neglect recognizing commenters as in-group/out-group members because the target of evaluation in the experiment was not the commenters, but political candidates.

Meanwhile, the three-way interaction among comments' valence, the commenters' age, and the candidate's age in predicting the candidate's trustworthiness showed that the relationship among a target, primary cues, and secondary cues was fairly complex. The target's age interacted with the commenters' age such that the commenters' age effect (i.e., older people's comments exert more influence) turned out to be significant only when the comments were geared toward a young candidate. The mechanism underlying this finding needs to be further explored in future research. One possible mechanism is that there is a power hierarchy of heuristic cues in which secondary cues (cues about cues) that are not directly related to the target (e.g., commentators' age) are only optionally considered when needed. If people feel others' comments are helpful enough as a primary cue for heuristically forming an impression of a political candidate, they may satisfice with the heuristic judgment and not pay much attention to secondary cues such as commenters' age indicated in the commenters' photos. Realization that the candidate who is being praised or criticized is an in-group member (i.e., young), however, may prompt people to become more meticulous about the reliability of the primary cue and willingly consider the secondary commenters' age cue. In the experiment, the young-looking unknown candidate's image may have boosted young participants' interest and motivation to get to know the candidate better and evaluate him or her more accurately. The fact that a young candidate, not a typical older politician, was acknowledged by older citizens may have made the candidate look more trustworthy.

These findings add nuance to the SIP theory by implying that CMC users use more

or less heuristic cues depending on the context. Although SIP assumes that CMC users consider whatever cues available in the environment to form a reliable impression of a target, in the new media environment where a number of informative cues are available, CMC users may take cues based on a certain cue hierarchy. Some common rules in the cue hierarchy (e.g., expert cue) may apply to most people (i.e., an expert's view takes priority over a layperson's) whereas some other rules (e.g., age stereotype cue) may or may not apply depending on the situation or the cue-takers' motivation level. Although further investigation is requested to comprehend the underlying psychological mechanism, the findings of the current study speak to the need for CMC scholars to further build off SIP theory by identifying which cues are more or less influential in impression formations.

The overall findings of this research bear practical implications. While political parties and candidates are keen on appealing to young voters, one of the most effective strategies for a new challenger to give a good impression to them seems to be showing others' favorable reactions to the candidate on SNSs. It will be particularly beneficial for a young candidate to stress that the candidate is highly evaluated by older people, regardless of sex. On SNS, candidates' and commenters' age can become easily salient to the perceivers, thereby either increasing or decreasing the effect of the comments. For an older candidate, the age of supporters may not matter much; it will be good enough to stress the overall positive public opinion of the candidate.

There are several limitations in this study's sample and design. First, the sample consisted entirely of young college students, so our conclusion cannot be generalized beyond this age group. Most participants in our student sample were in their early 20s and the effect of older commenters may or may not hold true if older people participated. Although no moderating conformity effect of the age similarity was found for the young participants in this study, it is possible that older participants show different patterns. Future study would

benefit from replicating the study with a broad range of ages. Nevertheless, the current findings contributed to the field as they showed how young voters would react to various cues, which was the topic of interest.

Second, whereas race is one of the core elements that could provoke a shared group identity, candidate's and participants' race was not considered in this study because three-fourths of the participants were Caucasian. Future researchers should examine the potential effects of same-race group identifications and race stereotypes on observers' perception of and attitude towards political candidates. For instance, whether and how racial minority people are influenced by their race group members' reaction to a candidate and how the candidate's race interacts with the effect needs to be empirically tested. Likewise, the potential effect of same- or opposite-sex identification with commenters is a valid research topic to investigate. While only the perceived trustworthiness of a target candidate was measured as the dependent variable in this study, future researchers are encouraged to test the interactions among cues for more various outcomes such as attitude or behavioral intention (e.g., voting intention).

In terms of timeframe, this study measured only the initial impression of a candidate's trustworthiness because the participants were requested to fill out the questionnaire immediately after being exposed to a novel stimulus. Long-term studies are needed to determine how long the impressions will hold and if some of the cues have a sleeper effect bringing a significant change to their final impressions. For instance, it is possible that any effect from candidates' photo such as candidates' age effect increases over time whereas comments' effect decreases because visual cues tend to be more memorable than textual cues. A longer timeframe will allow separating out the potential time effect.

Finally, it should be noted that there was no substantial message from the candidate (target of evaluation) in the stimuli in this study. Observers had to make a quick judgment

based on his or her photo, name, and others' comments provided in the screenshot without knowing the candidate's issue positions, family background, or even party identification. Obviously, in the real world, voters are provided a lot more information to elaborate on including the sender-created posts, which may create more complex information-processing dynamics. In the current study, however, we focused on the effects of the available heuristic cues while minimizing potential confounders.

Despite these limitations, the present research has its virtue as one of the few attempts that tried to dissect the complex cue interactions in the context of new media which bridge the characteristics of mass/interpersonal/peer communication. Most importantly, the current study suggests that SIP theory might need to be extended. Although it theorizes on Internet users' impression-formation processes under the assumption that there are only scarce available cues in CMC, the present study takes a step further. In the current cue-rich CMC environment, people might rely more on certain types of cues (e.g., more vivid or readily-accessible cues) as primary cues while ignoring or optionally taking additional cues as occasion demands rather than unconditionally taking them all. The findings suggest that CMC scholars further develop the SIP theory by investigating the potential cue hierarchy in the newer environment context.

This study contributes to the discipline by applying the CMC theories such as the SIDE model to the context of political communication and providing a bridging point between CMC which has its roots in interpersonal communication and political communication which is mainly studied in association with mass communication. Overall findings of this research demonstrated support for the SIP and SIDE models that, with the heightened group salience on a political candidate's Facebook, people utilized heuristic cues to form an impression of a target. However, findings of current study show that group-based categorization does not necessarily lead to conformity effect as most SIDE studies

demonstrated. There may be situations where group-based categorization works to out-group members' advantage. Future studies will benefit from applying SIDE model in a wide variety of contexts.

In conclusion, this study showed that SIP and SIDE were useful lenses that could apply to impression formation processes on social media where both sender and receiver cues as well as visual and textual cues coexist. This study represents an attempt to shed light on the complex cue hierarchy on SNSs and should prompt further research on how the changing media environment might alter the ways in which individuals make sense of the world and the target objects in it.

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Figure 1. An example of the young male candidate & positive comments from young commenters versions.



Figure 2. An example of the older male candidate & negative comments from older commenters versions.



Figure 3. 2-way interaction effect of comments' valence and the candidates' age on the perceived trustworthiness of the candidate.

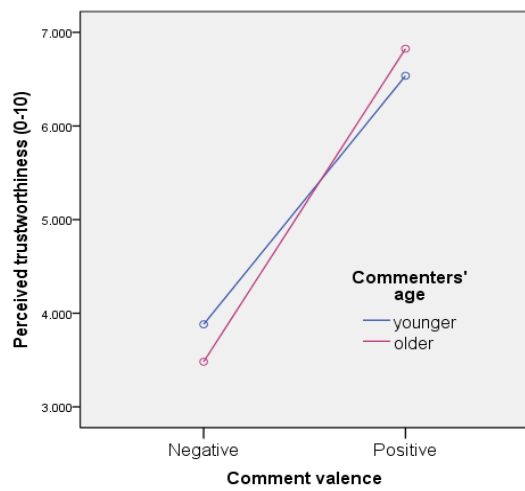


Figure 4. 3-way interaction effect of comments' valence, the commenters' age, and the candidate's age on perceived trustworthiness of the candidate

